

Baseline and Measurements Working Group – Preliminary Report

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Working Group Charter

- Recommend greenhouse gas reduction targets for Mountain View consistent with AB 32
 - Recommend reductions and offsets by category
- Review measurement methodology for baseline and periodic estimates of greenhouse gas emissions
 - Recommend a measuring interval
- Review and recommend a carbon calculator for individuals and businesses

The ICLEI Method

- Mountain View's 2005 carbon inventory was generated using the ICLEI method
- ICLEI = International Council for Local Environmental Initiatives
 - Association of local governments committed to sustainability
- ICLEI philosophy: Emission measurements are based on geographic boundaries and direct effects
 - Only those emissions which the local jurisdiction has control over are counted
- Example of counted: tailpipe emissions from all vehicles
 - Within the jurisdiction
 - Transiting the jurisdiction, even if not registered in the jurisdiction
- Example of not counted: emissions that occur during the production of food sold in the jurisdiction

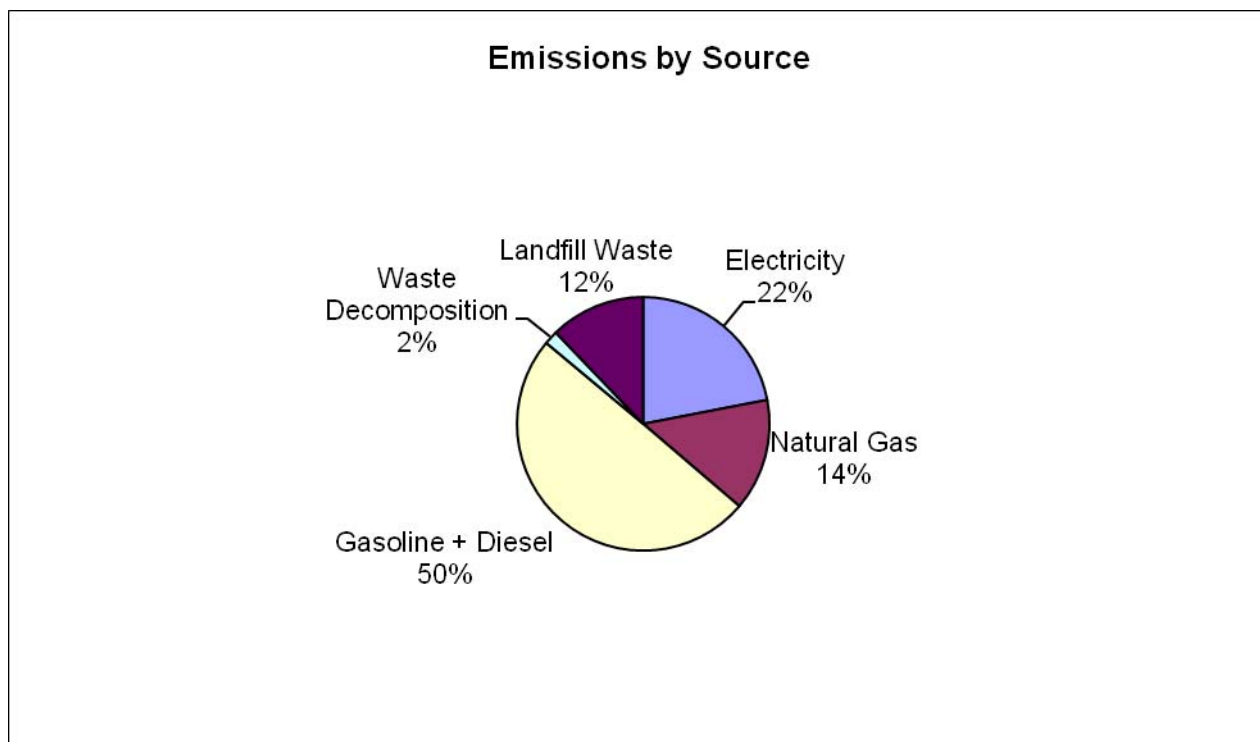
Mountain View's Participation in ICLEI

- Mountain View is a member of ICLEI and pays a yearly fee to use their software and services (\$1200)
- Many Bay Area jurisdictions use ICLEI
 - Oakland, San Jose, Berkeley, San Mateo County, etc.
 - Not Palo Alto though
- Using ICLEI allows Mountain View to compare our emissions reductions
 - Over time against our past emissions to see if we are meeting our goals
 - Against other cities in our area to see how we measure up to our neighbors

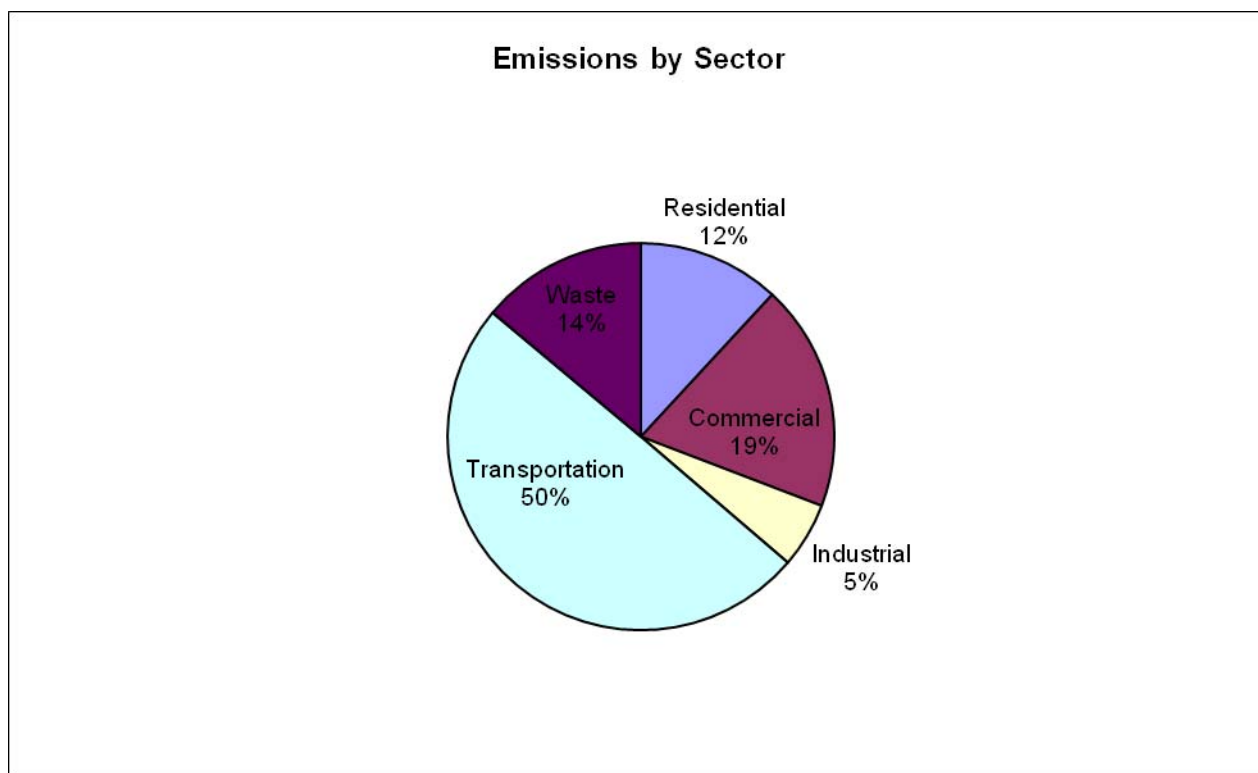
How the ICLEI Method Works

- Gather inputs from different large source activities and different economic sectors
 - Fine grained tracking on the order of specific organizations or businesses is typically not done
 - Fine grained tracking may be necessary in some cases
 - Example: Chula Vista, CA
 - 60% of the natural gas usage is for swimming pool and hot tub heating
- Take a known input from a greenhouse gas emitting activity
 - Example: number of kilowatt-hours of electricity used by the Commercial Sector in 2005
- Multiply by a conversion factor
 - Converts input into metric tons of CO₂e (equivalent CO₂ units)
- Only track CO₂ and methane as CO₂e
 - Other greenhouse gases, such as sulfur hexafluoride are stronger greenhouse gases but more difficult to track
- Ignore activities that are estimated less than 5% of total and difficult to collect data for
 - Example: lawn and garden care in general
 - But for some jurisdictions where lawns make up the majority of the land surface may require special treatment
 - Example: Colma where much of the city is occupied by cemeteries

2005 Inventory – Emissions by Source



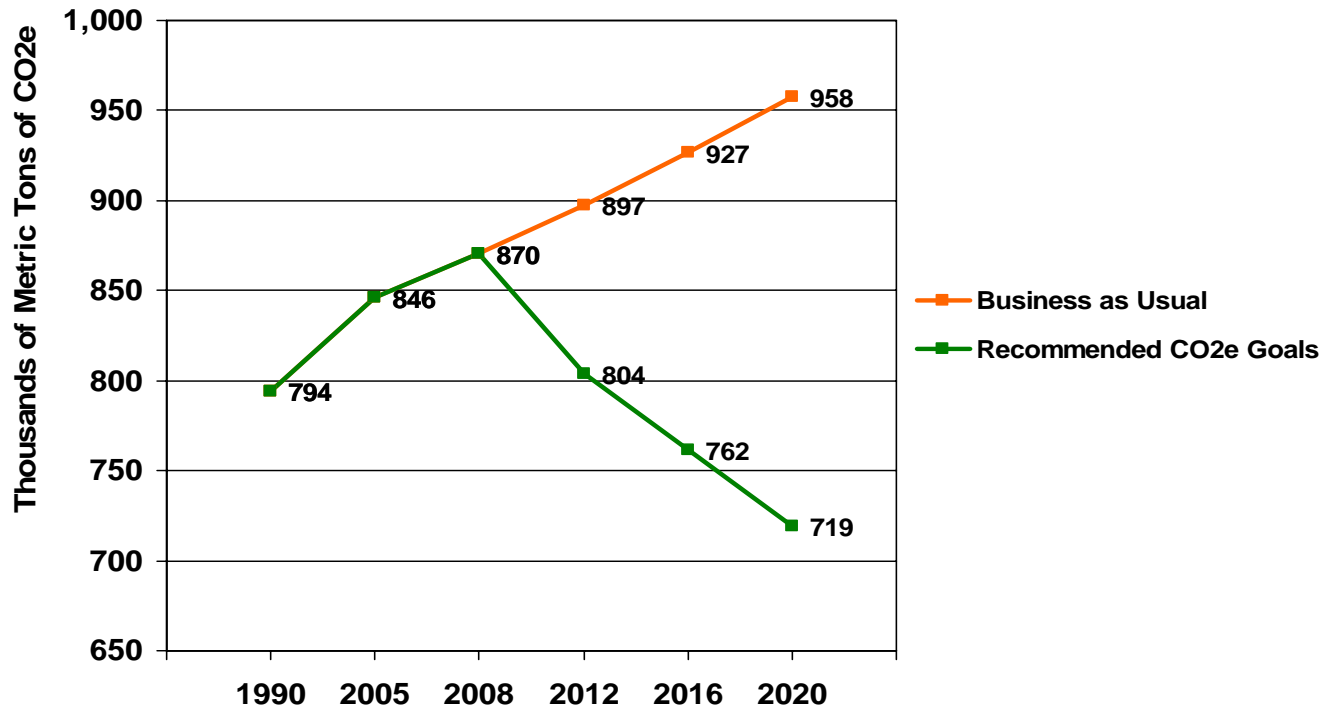
2005 Inventory – Emissions by Sector



Summary Recommendation #1 – CO2e Emissions Targets

- By 2012:
 - 5% reduction in community carbon emissions over 2005 baseline
 - Expected emissions are 803,839 metric tons of CO2e
 - Reduction of 42,307 metric tons of CO2e from 2005 baseline
 - Expected emissions per capita is 10.54 metric tons
- By 2016:
 - 10% reduction in community carbon emissions over 2005 baseline
 - Expected emissions are 761,531 metric tons of CO2e
 - Reduction of 84,615 metric tons of CO2e from 2005 baseline
 - Expected emissions per capita is 9.67 metric tons
- By 2020:
 - 15% reduction in community carbon emissions over 2005 baseline
 - Expected emissions are 719,224 metric tons of CO2e
 - Reduction of 126,922 metric tons of CO2e from 2005 baseline
 - Expected emissions per capita is 8.84 metric tons
- The city should also attempt to set sector-specific goals
 - Task Force may recommend such goals after WGs have reported

Summary Recommendation #1 – CO2e Emissions Targets (2)



Notes:

- These are the minimum recommended by ICLEI for long term sustainability
- Preponderance of scientific opinion is that long term sustainability requires 20% reductions below 1990 baseline
- Governor Schwarznegger has set a target of 80% below 1990 by 2050

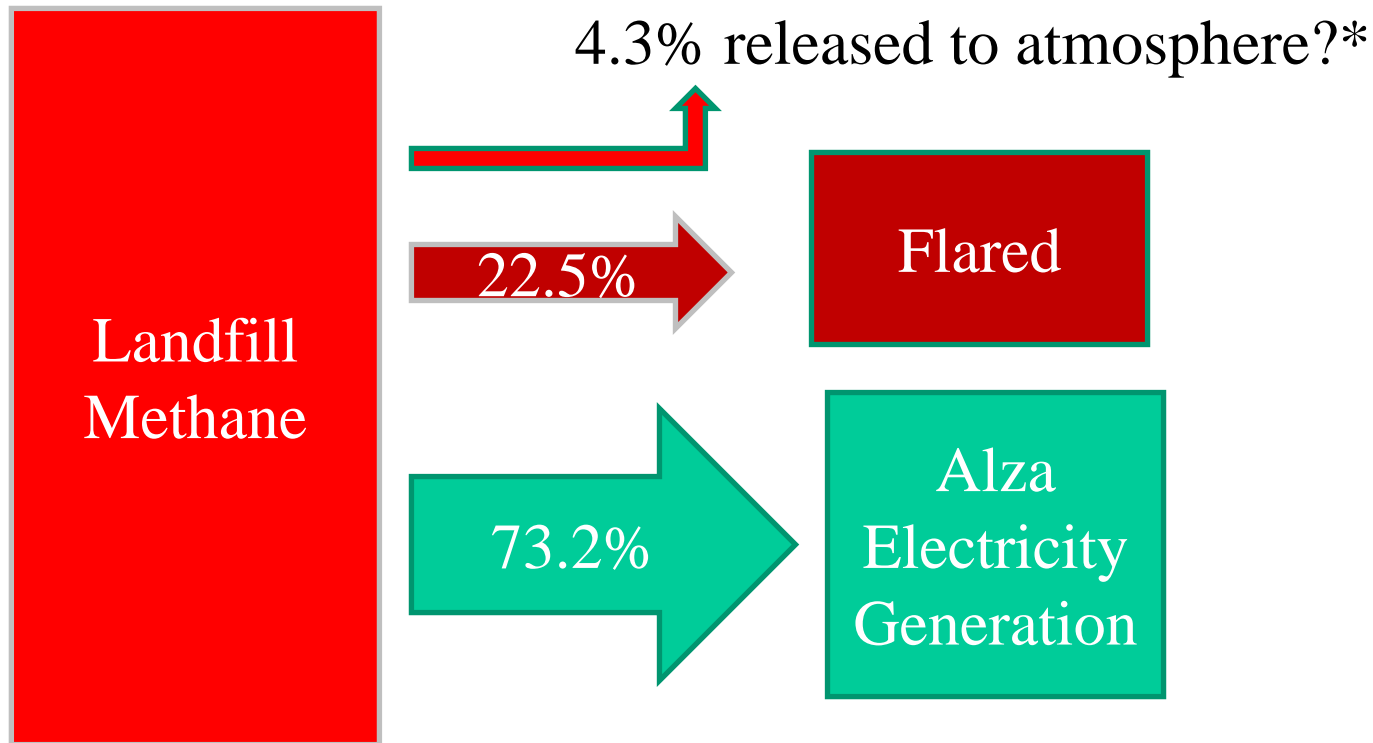
Other Cities' Reduction Targets

| City | Year | Stated Goals |
|---------------|------|--|
| Portland, OR | 2010 | 10% below 1990 |
| | 2030 | 40% below 1990 |
| | 2050 | 80% below 1990 |
| San Mateo, CA | 2009 | Below 2006 levels |
| | 2020 | Below 1990 levels |
| | 2050 | 80% below 1990 levels |
| Berkeley, CA | 2009 | 2% annual reduction from previous year |
| | 2020 | 33% below 2000 levels |
| | 2050 | 80% below 2000 levels |
| Palo Alto, CA | 2009 | City operations 5% below 2005 levels |
| | 2012 | City and community 5% below 2005 levels |
| | 2020 | City and community 15% below 2005 levels |
| San Jose, CA | 2015 | Reduce per capita energy use by 50% |
| | | Receive 100% of electrical power from clean renewable sources |
| | | Build or retrofit 50 million square feet of green buildings |
| | | Divert 100% of waste from landfill and convert waste to energy |
| | | Recycle or beneficially reuse 100% of wastewater (100 million gallons/day) |

Summary Recommendation #2 – CO₂e Measurement Methodology

- The ICLEI is adequate and useful, but be open to changing if a better measurement methodology becomes available
 - Primary problem with ICLEI is that it does not directly measure air travel (see Recommendation #3)
- Make sure any emission reductions reflect real reduction
 - Don't move emissions outside of city jurisdiction by zoning tricks, etc.
 - Don't try to avoid real reductions by adopting amended measurement methodologies that don't cause real reductions
 - Be wary of taking lots of credit for the natural reduction in methane emissions that will occur in Shoreline Park without any action
- Measure CO₂ equivalent (CO₂e) greenhouse gases not just CO₂
 - AB 32 just mentions CO₂
 - ICLEI does measure CO₂e

Shoreline Landfill Flowchart



*currently being measured

Summary Recommendation #3 – Measure Emissions from Air Travel

- ICLEI method does not account for air travel
 - Personal and business air travel
 - Emissions occurring due to air travel originating or terminating within a jurisdiction's boundaries
- Air travel emissions are growing faster than many other emission types
- Emissions from Moffet Field may grow over time
- Mountain View should attempt to measure emissions from air travel
 - Both personal and business travel for residents and commuters working within city boundaries
 - Emissions from nonmilitary uses of Moffet Field
 - Military uses are harder to measure since may be classified
 - Military uses are probably impossible for the city to influence

Summary Recommendation #4 – City Web Page on Individual/Business Action

- Many civic-minded individuals and businesses may be motivated to take action without any incentives or programs
 - Reductions in emission-related activities for economic or environmental reasons
 - Purchasing of carbon offsets or Renewable Energy Credits (RECs) for activities that cannot be avoided
- The City should develop a Web page with carbon calculators to help individuals and businesses measure and offset their carbon footprint
 - Recommend three carbon calculators
 - Acterra – personal
 - Carbon Concierge – personal and business
 - PG&E's ClimateSmart program – personal and business
- The City may want to partner with Acterra to develop more resources to help businesses to reduce their carbon footprint

Summary Recommendation #5 – More Information on PG&E Bill & City Utilities

- PG&E and city utilities currently have very rudimentary information on energy usage over time
- Mountain View should require PG&E to include easy to understand graphics showing
 - Energy usage over time
 - Average usage comparatively
- Mountain View water, garbage, and sewer should contain similar graphics

